SMALL NAVIGATION PROJECT

BACK CHANNELS

PORTSMOUTH HARBOR

AND

PISCATAQUA RIVER

NEW HAMPSHIRE AND MAINE

DETAILED PROJECT REPORT

U.S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS WALTHAM, MASS.

JUNE 1965

NEDED-R (26 Jul 65) 2d Ind
SUBJECT: Detailed Project Report for Small Navigation Project, Small-boat Channels in the Portsmouth-New Castle Area, Portsmouth, New Hampshire.

U. S. Army Engineer Div., New England, Waltham, Mass. 17 January 1966

TO: Chief of Engineers, ATTN: ENGCW-PD

1. There are inclosed 3 copies each of revised page iii of the pertinent data and revised pages 13 and 17 of the report for insertion in the 3 copies of the report retained in your office. Comments in paragraph 3 of the 1st Indorsement have been reflected in revised text. The minor discrepancies indicated in paragraph 4 are noted.

2. The Governor of New Hampshire has been informed of the proposed project. The comments of the Governor, endorsing the project, are inclosed to be included in Appendix D of the report.

3. Members of Congress were notified of formal adoption of the project by letters dated 23 December 1965. The Governor of New Hampshire, interested State agencies, and the City Manager of Portsmouth were notified of project approval on 27 December 1965.

Incl
as

E. J. RIBBS
Colonel, Corps of Engineers
Acting Division Engineer

ENGCW-PD (18 June 65) 1st Ind
SUBJECT: Detailed Project Report for Small Navigation Project, Small-boat Channels in the Portsmouth-New Castle Area, Portsmouth, New Hampshire

DA, CofEngrs, Washington, D. C. 20315, 26 July 1965

TO: Division Engineer, U. S. Army Engineer Division, New England
WALTHAM, MASSACHUSETTS 02154

1. The proposed report will be acceptable subject to the comments in the following paragraphs. Formal comments of the Governor of New Hampshire should be requested. After receipt of favorable comments fully endorsing the proposal, the small boat channels in the Portsmouth-New Castle area may be considered formally adopted under Section 107 of the 1960 River and Harbor Act. Authority is then granted to issue simultaneous notification to the concerned members of Congress informing them of the project approval. The notification should describe the project and local participation. For record purposes, the date of the notification will be considered the date of final approval.

2. The local cooperation requirements should include the requirement that local interests assume full responsibility for all project costs in excess of the Federal limitation of $200,000.

3. The estimated annual saving in lobster boat operating costs due to the improvement (paragraph 33) appears high. The costs saved would be fuel, oil, wages, and other variable costs. The Division Engineer should assure himself that the estimated saving does not include fixed charges that would continue whether the boats are idle or working.

4. Minor discrepancies in the recreational boating benefits are reflected in the maximum value and annual equivalent shown in paragraph 36, in the benefits included in Table IV for the 40-65 inboard class, and in Table III for the 26-40 outboard class. It is not required that the report figures be revised.

5. Upon final approval, the project will take its place on the backlog list. Funds in the FY 1966 budget will not be sufficient to reach this project. Construction will be dependent upon future appropriations. Authorization is granted to accomplish necessary preconstruction work, including preparation of plans and specifications. A formal increase in work allowance for this work cannot be established pending passage of the FY 1966 Appropriation Act and apportionment of funds. Pending receipt of a formal work allowance, authority is granted to proceed utilizing the obligation authority conveyed by ENGEC-B Message 30, dated 28 June 1965, as amended. A formal increase in work allowance of $8,000 under Code 902-216 will be provided after FY 1966 funds become available for allotment.

FOR THE CHIEF OF ENGINEERS:

K. McNaya, Col. C.E.

1 Incl
(3 cys w/d)

JACKSON GRAHAM
Major General, USA
Director of Civil Works

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASS. 02154

ADDRESS REPLY TO:
DIVISION ENGINEER

REFER TO FILE NO. NEDED-R

18 June 1965

SUBJECT: Detailed Project Report for Small Navigation Project, Small-boat Channels in the Portsmouth-New Castle Area, Portsmouth, New Hampshire

TO: Chief of Engineers
ATTN: ENGCW-PD

1. In accordance with ER 1165-2-14, there is submitted for review and comment an advance draft of the subject report.

2. Responsible officials of the State of New Hampshire and the City of Portsmouth concur in the recommended project and have indicated a willingness and ability to meet the requirements of local cooperation. Formal assurances of participation will be obtained from the State and the City during preparation of final design for the project.

3. The plans and specifications will be prepared in accordance with the Detailed Project Report as approved. Funds in the amount of $8,000 for preparation of the plans and specifications and $147,500 for the Federal share of construction will be required. The local share will be $92,500.

4. Formal comments of the Governor of New Hampshire will be requested after approval of the advance draft.

1 Incl
as (10 Cys)

R. R. PLOGER
Brigadier General, USA
Division Engineer

U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASS. 02154

ADDRESS REPLY TO:
DIVISION ENGINEER

REFER TO FILE NO. NEDED-R

DETAILED PROJECT REPORT

SMALL NAVIGATION PROJECT - SMALL BOAT IMPROVEMENTS IN THE PORTSMOUTH - NEW CASTLE AREA, PORTSMOUTH HARBOR, NEW HAMPSHIRE

PERTINENT DATA

1. Purpose. - To permit increased use of the back channel area on the south side of Portsmouth Harbor by small commercial and recreational craft through the removal of several shoals within the natural channel areas.

2. Location. - The Portsmouth Harbor back channel area is comprised of the upper reach of Little Harbor, Sagamore Creek and shallow channels between the mainland and islands on the south side of Portsmouth Harbor.

3. Existing Project. - There is no Federal project in the back channel area of Portsmouth Harbor.

4. Improvement Desired. - Local interests have requested dredging of the back channels and existing mud-flats adjacent to the channels between the islands scattered along the south side of Portsmouth Harbor, so as to enlarge the navigable water area for small boats at low tide, and to provide a 6-foot small boat channel up Sagamore Creek from Little Harbor.

5. Recommended Improvement. - A channel six feet deep, 100 feet wide extending from Little Harbor through the Rye-New Castle drawbridge and then in a northerly direction between the mainland and Leach's Island to deep water in the vicinity of Shapleigh and Goat Islands. A public landing on Goat Island should be provided by local interests. A channel 75 feet wide, 6 feet deep up Sagamore Creek to a public landing on the downstream side of the Sagamore Avenue bridge and a 75-foot wide, 6 foot deep anchorage strip, totalling 3 acres, adjacent to the channel in Sagamore Creek.

6. Estimated Costs. -

Dredging 6-foot channels and anchorage	
120,000 c.y. of ordinary material @ $1.60	$192,000
rock removal 300 c.y. @ $30	9,000
Contingencies	20,000
Engineering and Design	12,000*
Supervision and Administration	17,000
Construction Total	$250,000

*Includes $2,000 for project study costs

Other Costs

Additional Navigation Aids (U.S. Coast Guard)	$ 2,200
Public Landings (pier and floats)	30,000
TOTAL FEDERAL AND NON-FEDERAL COSTS	$282,200

7. Apportionment of First Cost

Federal:

Corps of Engineers: 63% of $250,000	$157,500
U.S. Coast Guard: Additional Navigation Aids	2,200
Total Federal	$159,700

Non-Federal:

Cash Contribution 37% of $250,000	$ 92,500
Public Landings (pier and float)**	30,000
Total Non-Federal	$122,500

**Self-liquidating

8. Annual Costs

Federal:

Interest and Amortization (50 yrs @ 3-1/8% 0.03979 x $157,500)	$ 6,267
Maintenance: Channel and Anchorage	4,000
Navigation Aids	400
Total Federal	$ 10,667

Non-Federal:

Interest and Amortization (50 yrs @ 3-1/8% 0.03979 x $92,500)	$ 3,680
Total Federal and Non-Federal Annual Charges	$ 14,347

9. Benefits

	Local	General	Total
Reduction in lobster fishing cost		9,600	9,600
Increased Recreational Boating	13,600	13,600	27,200
	$13,600	$23,200	$ 36,800
	37%	63%	100%

10. Benefit-Cost Ratio

$36,800/$14,347= 2.5 to 1.0

11. Requirements of Local Cooperation

a. Provide a cash contribution of 37 percent of the project construction cost ($92,500).

b. Provide, maintain and operate without cost to the United States two public landings or wharves with provisions for the sale of motor fuel, lubricants, and potable water open to all on equal terms. These landings are to be located adjacent to the deep water area south of the Portsmouth-New Castle bridge between Shapleigh and Goat Islands and on Sagamore Creek downstream of the Sagamore Avenue bridge.

c. Provide and maintain piers, floats, mooring facilities and berthing areas with depths commensurate to the channel as needed for transient and local craft as well as necessary access roads, parking areas and other needed public use shore facilities and services open to all on equal terms.

d. Provide without cost to the United States all lands, easements and rights-of-way for the construction and maintenance of the project when and as required.

e. Hold and save the United States free from damages due to the construction works and maintenance of the project.

f. Make such utility and other relocations or alterations as required for project purposes.

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U. S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASS. 02154

ADDRESS REPLY TO:
DIVISION ENGINEER

REFER TO FILE NO. NEDED-R

18 June 1965

DETAILED PROJECT REPORT
SMALL NAVIGATION PROJECT
SMALL BOAT CHANNELS IN THE PORTSMOUTH-NEW CASTLE AREA, PORTSMOUTH, NEW HAMPSHIRE

AUTHORITY

1. This Detailed Project Report is submitted pursuant to authority contained in Section 107 of the River and Harbor Act of 1960. Further authority was provided by 1st Indorsement dated 25 March 1965 from the Chief of Engineers in reply to a letter dated 11 March 1965 from the Division Engineer, New England Division, Subject: Small Navigation Project, Back Channels, Portsmouth Harbor.

PURPOSE AND EXTENT OF STUDY

2. This study was made to determine the engineering feasibility and economic justification for providing navigation improvements for small boats in the Portsmouth Harbor back channel area. This area comprises the upper end of Little Harbor, Sagamore Creek and the shallow channel between the mainland and a group of islands on the south side of Portsmouth Harbor. This study also includes consideration of a connecting channel from Little Harbor into the back channel area. *This study does not include consideration of navigation improvements to Little Harbor for which separate study authorization exists.* A public hearing was held at Portsmouth, New Hampshire on 24 May 1960 to determine the improvements desired by local interests. A detailed hydrographic survey was made during June and July 1961. Other data for the study was obtained from field investigations, available maps, commercial fishing and recreational boating statistics, and from information submitted by local interests. All Federal, State and local authorities interested or affected by improvement of the back channels were contacted. Conferences have been held with local officials to discuss improvements requested at the hearing and later modifications of these requests, together with attendant requirements of local cooperation.

DESCRIPTION

3. The "back channels" are located among the islands on the south side of Portsmouth Harbor at the mouth of the Piscataqua River

which forms a portion of the boundary between the State of Maine and New Hampshire. The main channel in the lower Piscataqua River and in Portsmouth Harbor winds around sharp bends and over submerged ledges, exceeding 35 feet in depth, passing north and east of Pierce and New Castle Islands. Since the Piscataqua River serves as the drainage channel for the extensive tidal basin of Great Bay and its six main tributary streams, it is subject to strong tidal currents. The average current velocity at full strength in the main harbor varies from about 2.6 to 4.0 knots, whereas in the back channels the velocity varies from less than one to two knots. The tide ranges in Portsmouth Harbor are 7.8 feet (mean) and 9.0 (spring). There is presently no adequate channel from Little Harbor, behind the islands, into Portsmouth Harbor particularly at the lower stages of the tide. The controlling depth from the entrance to Sagamore Creek north between the mainland and Leachs Island is about one foot. The controlling depth in Sagamore Creek is about 3 feet, although average depth in the winding channel is deeper. The entire waterway is sheltered from any strong winds which interfere with navigation.

4. The back channels are used by small fishing boats and recreational craft. The area is shown on the maps accompanying this report, and on U. S. Coast and Geodetic Survey Charts 211 and 329.

TRIBUTARY AREA

5. The region immediately tributary to the sheltered waterways on the south side of Portsmouth Harbor is comprised of the City of Portsmouth, the Town of New Castle, and the Town of Rye, all in New Hampshire. In 1960, Portsmouth had a population of 25,833, New Castle 823 and Rye 3,244. The principal industries of the area are operation of the U. S. Navy Yard and the Pease Air Force Base, the manufacture of shoes and gypsum products, generation of electrical power, fishing and boat storage yards. Provision of services associated with outdoor recreational activity is of growing importance in the economic life of the New Hampshire seacoast region. The population of the coastal towns increases markedly during the summer from an influx of vacationists, with a summer population estimated at over 60,000. As a result, recreational boating has become an important factor in the region's economy.

6. The area is served by a network of good highways (U.S. Route 1 and scenic coastal Route 1A, and Interstate Highway I-95) and a branch line of the Boston and Maine Railroad.

BRIDGES

7. There are five bridges that affect navigation in the back channel region of Portsmouth Harbor. These are as follows: (1) The Wentworth bascule bridge, spanning the entrance channel to the study area between the shores of Rye and New Castle Island; (2) the Sagamore Avenue Bridge, spanning Sagamore Creek in Portsmouth on Route I-A leading to Rye; (3) the New Castle Avenue Bridge in Portsmouth connecting Shapleigh (Marvin) Island to the mainland; (4) the Shapleigh-Goat Island Bridge joining Shapleigh Island to Goat Island and the causeway connecting to New Castle Island; (5) Pierce Island Bridge, joining the mainland in Portsmouth to Pierce Island. Pertinent data concerning these bridges is included in Table I.

8. Four of the five bridges impose vertical clearance limitations on navigation. There are at present no plans for alteration of these bridges.

PRIOR REPORTS

9. Portsmouth Harbor and Piscataqua River have been the subject of several previous reports. The two most recent are described in Table II.

TABLE I

Name	Purpose	Type	Horiz. Clearance (ft.)	Vert. Clearance (ft. above mhw)	Owner	Plans Approved By War Dept.	Miles Above Mouth	Reference Point
(1) Rye - Newcastle	Hwy.	Bascule	29	12 (1)	N.H. State Hwy. Dept.	4/11/42	1.0	Little Harbor
(2) Sagamore Creek	Hwy.	Fixed	153	7	N.H. State Hwy. Dept.	10/24/40	2.1	Little Harbor
(3) Portsmouth-Shapleigh (Marvin) Island	Hwy.	Fixed	60	11	N.H. State Hwy. Dept.	10/21/53	3.0	Piscataqua R. Little Harbor
(4) Newcastle-Goat Island-Shapleigh (Marvin) Island	Hwy.	Fixed	48	14	N.H. State Hwy. Dept.	10/21/53	2.5	Piscataqua R.
(5) Portsmouth-Pierce Island	Hwy.	Fixed	65	16	City of Portsmouth	6/13/56	3.0	Piscataqua R.

(1) When closed

TABLE II

PUBLISHED IN	NATURE AND DATE OF REPORT	WORK CONSIDERED AND RECOMMENDATIONS
H. Doc. No. 556 82nd Cong., 2nd Session	Survey (Review of Reports) 1952	Removal of ledge rock in the vicinity of Gangway Rock, the southwest point of Badgers Island and Boiling Rock to 35 feet below mean low water. Project modification authorized by R & H Act of 1954. Favorable
H. Doc. No. 482 87th Cong., 2nd Session	Survey Report 1962	Widening channel at depth of 35 feet by removal of rock at Henderson Point, Gangway Rock, Badgers Island, and Boiling Rock, and extension of channel 35 feet deep 400 feet wide from Boiling Rock to a turning basin of the same depth at Atlantic Terminal near the entrance to Great Bay. Favorable. Project authorized by R & H Act of 1962.

No recent reports has considered areas that are pertinent to the present study of the back channels.

EXISTING CORPS OF ENGINEERS' PROJECT

10. The original Corps of Engineers' project in the waterway was for Portsmouth Harbor only and was authorized by the River and Harbor Act of 1879 and modified in 1890. It provided for a stone breakwater extending from Goat Island to Newcastle Island, the removal of a portion of ledge rock on the southeast side of Badgers Island to a depth of 18 feet below mean low water, and the removal of Pier Rock to a depth of 12 feet below mean low water.

11. Work on the project was initiated in 1879 and the entire project completed in 1892. The breakwater was designed to eliminate dangerous cross currents in the vicinity of Goat Island ledge and was completed in 1881. Removal of part of Gangway Rock to 20 feet began in 1881 and was completed in 1888. Removal of ledge at the southwest point of Badgers Island to 18 feet was started in 1881 and completed in 1891. Removal of Pier Rock to 12 feet as authorized by the River and Harbor Act of 1890 was accomplished in the two-year period 1891-1892. The total expenditures in Portsmouth Harbor for these early projects were $130,392.61, all of which was for new work.

12. House Document No. 556, 82nd Cong., 2nd Session, provided for the removal of ledge rock in the vicinity of Gangway Rock, the southwest point of Badger's Island and Boiling Rock to 35 feet below mean low water. Construction of this project was authorized by the River & Harbor Act of 1954 and initiated and completed in 1956. The total expenditure for this project was $1,175,000, all of which was for new work.

13. House Document No. 482, 87th Congress, 2nd Session, modified the project by providing for widening of the 35-foot channel at bends by the removal of ledge rock at Henderson Point, Gangway Rock, Badger's Island, the Maine-New Hampshire Interstate Bridge, and Boiling Rock, and extending the channel 500-feet wide and 35 feet deep upstream from Boiling Rock to a turning basin of the same depth at the Atlantic Sales Terminal near the entrance to Great Bay. This project modification was authorized by the River and Harbor Act of 1962, construction was initiated in 1964. The latest (1964) estimate of cost of this modification is $4,340,000.

LOCAL COOPERATION ON EXISTING AND PRIOR PROJECTS

14. The River and Harbor Acts of 1954 and 1962 required that local interests furnish free of cost to the United States all lands, easements and rights-of-way necessary for construction of the project, and hold and save the United States free from damages due to the construction works. The 1962 Act also requires local interests to provide and maintain without cost to the United States, depths in berthing areas and local access channels serving the terminals commensurate with the project depth. All of the requirements of local cooperation required under the existing project have been met.

OTHER IMPROVEMENTS

15. The New Hampshire Port Authority is constructing a $1,000,000 State Pier at Nobles Island for deep-draft commerce. No other improvements for general navigation in the study area are known to have been made by local interests.

TERMINAL AND TRANSFER FACILITES

16. Commercial fish landings in the Back-Channel area are restricted to privately-owned floats and small piers along the City waterfront west of Pierce's Island, maintained by companies and individuals engaged in lobster fishing. Recreational landings are located on the City waterfront at Prescott Park including a basin area, west of Seaward Rocks at the northerly entrance to the Back Channel area. The basin has three berths, approximately 75 feet in length and can accommodate craft with a maximum draft of 5 feet at mean low water. A float stage is located immediately north of the Pierce's Island bridge during the boating season and provides berthing space approximately 100 feet in length with a depth of 5 feet at mean low water. Neither landing has fueling nor potable water facilities. In addition, a launching ramp for trailered boats has been constructed adjacent to the channel near the westerly end of Pierce's Island and is patronized by community and regional recreational boat owners.

17. A boatyard, lift and repair facility is located on Sagamore Creek, approximately 500 yards east of the Sagamore Bridge. The yard can accommodate boats up to 43 feet in length and 15 long tons in weight. The yard repairs wooden hull vessels and services gasoline and diesel marine engines. It has facilities for storing sixteen 25-foot boats under cover and one hundred boats up to 100 feet in length in the open. It has berths for 40 small craft alongside and moorings for an additional 40. The average number of boats stored is 125.

IMPROVEMENT DESIRED

18. At the public hearing held on 12 August 1960 in Portsmouth, local interests indicated a desire for channel improvement to the back channels of Portsmouth Harbor. They requested dredging the back channels and existing mud-flats adjacent to channels between the islands scattered along the south side of Portsmouth Harbor, so as to enlarge the navigable water areas for small boats at low tide, and to provide a small boat navigable channel from Sagamore Creek and Little Harbor to Porstmouth Harbor. Although the initial proposal was for a depth of 8 feet and continuous channels, local interests later indicated acceptability of a 6-foot depth and separate disconnected channels.

19. A meeting with State and local officials was held in Portsmouth on 10 February 1965 to discuss various phases of the project study. At this meeting local authorities stated that channel improvement in the

Portsmouth basin south of Pierce Island and in the vicinity of the Portsmouth waterfront north of the Portsmouth-Pierce Island bridge were no longer desired. Improvement of this area would be a part of their own plans for waterfront development. They did indicate, however, that a channel 6 feet deep from Little Harbor through the Rye-New Castle bascule bridge north into the deep water area south of Shapleigh and Goat Islands is desired. In addition, a 75-foot wide, 6-foot deep channel up Sagamore Creek from Little Harbor, with an adjacent anchorage would be adequate to serve local needs for small boat navigation. Lobstermen have requested a reduction in width of the originally desired channel in the creek to 75 feet to leave room for anchorage.

EXISTING AND PROSPECTIVE COMMERCE

20. Waterborne commercial activity on the back channels results from activity of small lobster and fishing companies. Commerce in 1962 totalled 234 tons of lobster and 9 tons of fin fish. The average annual lobster catch exceeds 200 tons. The ex-vessel value of this catch is estimated at $0.60 per pound, or about $240,000. Future lobster commerce in this area is expected to continue at this level, due to the limited fishery resource.

VESSEL TRAFFIC

21. There are 24 lobster boats based on the back channels of the following approximate dimensions:

No.	Length in feet	Draft in Feet
9	30-35	4
1	25	3
14	15	2

These boats are used for fishing about 180 days a year, for a total of nearly 4,000 round trips.

22. There is considerable recreational boat activity in the back channel area. Over 1,300 recreational boats are based on or near the back channels and use these waterways. Of these recreational craft, about 1,100 are outboards and 200 are inboards. In addition, numerous transient craft use these waterways. On the basis of a 10-week season

and an estimate of two round trips a week per boat for about one-third of the recreational craft in the area, yields an estimated total of 8,600 round trips of recreational craft in these channels per season. These craft range in length from 15 feet to 65 feet and in draft from 2 feet to 5 feet.

DIFFICULTIES ATTENDING NAVIGATION

23. Navigation of small craft in the Piscataqua River and Portsmouth Harbor is severely hampered by rapid tidal currents. The irregularities of width and depth plus the abrupt directional changes of course result in strong cross currents and eddy conditions, tidal velocities range from 2.6 to 4.0 knots. These current velocities are confined to the main river passing north and east of Pierce and New Castle Islands. Under various wind conditions tidal rips form at the entrance to Portsmouth Harbor which endanger small craft operation in the area. To avoid these hazards and to shorten the distance traveled, commercial fishermen and other boatment returning to the docks along the city waterfront take advantage of the sheltered waters of Little Harbor and the back channels behind the islands on the south side of Portsmouth Harbor. This passage can only be attempted at the higher stages of the tide. Local interests have stated that small craft have suffered damages from striking rocks in the vicinity of the bascule bridge and have grounded on shoals in Sagamore Creek and in the channels leading to Portsmouth.

24. Due to the increase of recreational boating and lobstering in the Portsmouth Harbor area, anchorage areas have become overcrowded to the point where boats can no longer obtain berths or mooring areas on the New Hampshire side of the main harbor.

WATER POWER AND OTHER SPECIAL SUBJECTS

25. The waterway is tidal throughout its entire area. There is no problem of water power, flood control, pollution or any related subject pertinent to this navigation study. The U. S. Fish and Wildlife Service anticipates no significant adverse effect on fish and wildlife resources as a result of dredging operations. Their report is included in Appendix A. The proposed improvement primarily affects recreational boating, a major facet of the recreational industry in the region.

PLAN OF IMPROVEMENT

26. Consideration was given to the originally desired continuous channels for small boat navigation behind the islands on the south side of Portsmouth Harbor. Four of the five bridges crossing navigable waters in the study area are of fixed design imposing vertical limitations on small craft to such an extent that channel improvements through these structures are not warranted. A plan of improvement consisting of separate channels that avoid the bridges was studied. This plan would be consistent with the desires of local interests. The plan was composed of four channels all 100 feet wide, 6 feet deep as follows:

(1) A channel from Little Harbor through the Rye-New Castle drawbridge up Sagamore Creek to a public landing downstream of the Sagamore Avenue bridge.

(2) A channel from the Sagamore Creek channel in a northerly direction between the mainland and Leach's Island to the deep water area south of Shapleigh and Goat Islands and a proposed public landing on Goat Island.

(3) A channel from Portsmouth Harbor opposite Henderson's Point between Shapleigh and Pierce Islands and across the Portsmouth basin to a public landing south of the Portsmouth-Pierce Island bridge.

(4) A channel along the Portsmouth waterfront including a 1.6-acre anchorage, 6 feet deep, north of the Portsmouth-Pierce Island bridge.

The total cost of this plan was estimated at $471,000. The Federal share would be $216,000 and Non-Federal cost $255,000, which includes the cost of three public landings and spoil disposal areas. This plan was presented to state and local officials for their comments and approval. They indicated that the channel into the Portsmouth basin north of Shapleigh Island and the channel and anchorage along the Portsmouth waterfront were no longer needed as part of their plans for harbor improvement.

27. The above plan of improvement was modified to provide a channel 100 feet wide, 6 feet deep from Little Harbor through the Rye-New Castle drawbridge north between the mainland and Leach's Island to deep water south of the bridge between Shapleigh and Goat Islands with a public

landing on Goat Island, a channel 75 feet wide, 6 feet deep up Sagamore Creek to a public landing on the downstream side of the Sagamore Avenue bridge and a 75-foot wide, 6-foot deep anchorage strip totalling 3 acres, adjacent to the channel in Sagamore Creek.

28. Local authorities have indicated that this plan of improvement meets their present needs and that the requirements of local cooperation for this project would be met.

SHORELINE CHANGES

29. The suggested improvement consists of dredging and removal of shoal areas in the waterway. The removal of material will cause no appreciable change in existing conditions and tidal currents. Therefore, no effect on the shoreline will result.

AIDS TO NAVIGATION

30. The United States Coast Guard has been consulted in regard to the need for establishing aids to navigation in the area considered for improvement. The U. S. Coast Guard report is included in Appendix C. The first costs and annual maintenance costs for the necessary aids are as follows:

First Cost	$2,200
Annual Maintenance	400

ESTIMATE OF FIRST COST

31. An estimate of the first cost for construction of the proposed plan of improvement has been made based on the hydrographic and probing survey of June and July 1961. The materials to be dredged are expected to be mud and sand with removal of a small amount of boulders and ledge in Sagamore Creek. A rock crib blocks part of the channel 75 feet upstream of the bascule bridge connecting Rye and New Castle. This obstruction is part of a former wooden bridge. The removal of this rock crib is included in the estimate. Unit costs are based on prices prevailing in March 1965, and on the removal of the material by bucket dredge with scow disposal on an approved off-shore dumping ground. Dredging quantities are in terms of in-place measurement and include an allowance of one-foot of overdepth dredging and side slopes of one vertical to three horizontal. Aids to navigation would be provided by the U.S. Coast Guard. Local interests would be responsible

for construction of the self-liquidating public landings and berthing areas. The estimated first cost, including an allowance for contingencies, is as follows:

PROJECT COST ESTIMATE

Cost Acct. No.	Item	Project Features (6-ft. channel and anchorage)
09	Dredging (ordinary material)	
	120,000 cy @ $1.60	192,000
	rock removal (300 cy @ $30)	9,000
	Contingencies	20,000
	Total	$221,000
30	Engineering & Design	12,000*
31	Supervision & Administration	17,000
	Total Construction Cost	$250,000
	Aids to Navigation (Coast Guard)	2,200
	Public Landings (piers and berths) Self-liquidating	30,000
	Total Project Cost (Federal and Non-Federal)	$282,200

*Includes $2,000 for project study cost

ESTIMATES OF BENEFITS

32. Navigational improvement of the back channels on the south side of Portsmouth Harbor will result in increased recreational boating and reduced costs of commercial fishing. Development of recreational boating in Sagamore Creek has been restricted by shoals in the natural channel and lack of anchorage space, lobster boats are forced to anchor in the natural channel in order to prevent grounding. A public landing adjacent to the natural deep water area south of Shapleigh and Goat

Islands would permit use of this area for anchorage. Nearly all craft operating in the waterway between the mainland and Leach's Island have been hampered by tidal delays averaging 2 hours per boat during normal tide cycles and about 4 hours during extreme low tides.

33. The U. S. Fish and Wildlife Service reports that the principal commercial fishery benefit accruing to the project would be a saving in operating costs to the lobster fishermen. (See Appendix A). The annual lobster catch is valued at $240,000 and requires about 4,000 round trips of the lobster boats. These trips average about 10 hours so the gross value of catch per boat-hour is about $6.00. About one-third of the trips are estimated to be delayed an average of 2.5 hours each, or a total of about 3,350 hours of delay. The gross value of this lost fishing time is about $20,000. The total operating cost of lobster fishing averages about 60 percent of the ex-vessel value of the lobsters caught. Savings to the fishermen from elimination of tidal delay is reflected in wages and fuel consumption, representing 80 percent of the total operating cost. Therefore, the annual saving in lobster boat operation due to the improvement would be about $9,600.

34. Benefits for the recreational fleet have been evaluated as the gain in annual return which the owner of the craft would enjoy, if improvements were made. The annual net return to the owners of recreational boats has been taken as the net amount the owners would receive if they chartered their boats to others. The value of this gain is expressed as a percentage of the current market value of the fleet. The gain represents the difference between present use of the harbor and the increased use that will be made possible as a result of improvement. Ideal return varies according to the size and type of boat. For this report, the ideal return would range from 11 percent for outboards to 6 percent for the larger boats.

35. Local interests reported 1379 recreational craft in or near the back channel areas. Part of this fleet use the basin south of Pierce Island and the Portsmouth waterfront area for anchorage. In view of the plans of local interests to develop this area as part of Portsmouth waterfront development for recreational purposes, the portion of the fleet that would use this area would not benefit from the proposed Federal improvement. It is estimated that the number of boats to be excluded would amount to 79 boats. The benefit to the existing fleets is shown in Table III.

36. It is expected that during the 50-year project life, recreational craft using the waterways, independent of improvement, will increase by approximately 50 percent of the existing fleet. The annual benefit to

these future boats due to improved navigation conditions will increase from zero to a maximum of $8,990. The average annual equivalent of this benefit is 0.387 x $8,990 = $3,480.

37. Improvement of the waterway would cause an additional expansion of recreational boating activity that could not otherwise occur. This added expansion is estimated to be about 5 percent of the existing fleet or 65 boats. The benefits resulting from this new fleet expansion due solely to the waterway improvement, as shown in Table IV, results in an annual benefit of $14,890 at the end of the 50-year project life. The average annual equivalent of this benefit is 0.387 x $14,890 = $5,760.

38. It is not expected that any boats will transfer from other harbors along the coast as the nearest harbors to Portsmouth are York, 5.5 miles north, and Rye, 4.2 miles to the southwest. Numerous transient craft visit the Portsmouth Harbor area during the cruising season. The majority of these boats find adequate anchorage and accommodations in Pepperell Cove on the Kittery side of the main river, or in the anchorage northward of New Castle Island, as a result no benefits have been estimated for this transient fleet.

HARBOR: Portsmouth Harbor
Back Channel

TABLE III BENEFITS TO RECREATIONAL BOATING
EXISTING FLEET

100-day boating season

Type of Craft	Length (feet)	No. of Boats	Depreciated Value Average $	Depreciated Value Total $	Percent Return Ideal	Percent Return % of Ideal Pres.	Percent Return % of Ideal Ftr.	Gain	Value $	On Cruise Avg. Days	On Cruise % of Season	On Cruise Value $
Recreational Fleet												
Outboards	Under 16	650	$ 300	$195,000	11	100	100	0	0			
Inboards	Under 16	7	$ 500	3,500	9	100	100	0	0			
Outboards	16-25	468	$ 1800	842,400	9	90	100	0.9	7582			
Inboards	16-25	81	3500	283,500	9	90	100	0.9	2552			
Outboards	26-40	2	2400	4,800	7	80	100	1.4	66			
Inboards	26-40	80	5000	400,000	7	80	100	1.4	5600			
Inboards	40-65	12	12000	144,000	6	75	100	1.5	2160			
TOTALS		1300		$1,873,200					$17,960			

HARBOR: Portsmouth Harbor
Back Channel

TABLE IV BENEFITS TO RECREATIONAL BOATING
NEW BOATS

100 day Boating season

Type of Craft	Length (feet)	No. of Boats	Depreciated Value Average $	Depreciated Value Total $	Percent Return Ideal	% of Ideal Pres.	% of Ideal Ftr.	Gain	Value $	On Cruise Avg. Days	On Cruise % of Season	On Cruise Value $
Recreational Fleet												
Outboards	10-20											
Outboards	16-25	43	1800	77,400	9	0	100	9	6,965			
Inboards	16-25	11	3500	38,500	9	0	100	9	3,465			
Inboards	26-40	10	5000	50,000	7	0	100	7	3,500			
Inboards	40-65	1	12000	12,000	6	0	100	6	960			
TOTALS		65		177,900					14,890			

39. Added recreational boating facilities are planned for the area encompassed by the project. The New Hampshire State Port Authority in cooperation with the State Recreation Division are planning the construction of a double launching ramp. flanked by piers and float stages in the vicinity of Witch Creek at the State-owned Fort Dearborn site in the near future. The City of Portsmouth proposes to expand the present launching ramp on Pierces Island by approximately 75 feet to accommodate the increasing volume of trailer-boat traffic. A second ramp is planned for the north side of Pierces Island in the cove east of Gangway Rock. A public landing is presently under construction at the granite block abutment of the former Pierces Island bridge site. Float stages will be secured to the face of the abutment to provide a small-boat berth approximately 85 feet in length.

40. The improved channel facilities considered would result in benefits which would accrue both to recreational boating and commercial fishing. The benefits are summarized as follows:

	General	Local	Total
Reduction in lobster fishing cost	$ 9,600	-	$ 9,600
Increased use of present recreational fleet	8,980	8,980	17,960
Increased return to future normal growth of recreational fleet	1,740	1,740	3,480
Added growth of recreational boating due to project	2,880	2,880	5,760
Total Benefits	23,200	13,600	36,800
Percentage	63	37	100

APPORTIONMENT OF COSTS AMONG INTERESTS

41. The costs of the recommended improvement are apportioned between Federal Government and local interests in accordance with the percentage of general and local benefits to be derived. All commercial fishing benefits are considered to be general in nature while recreational benefits are divided

equally between Federal and local interests. The cost of developing public landings and providing berthing space are considered to be a local self-liquidating expense. The first costs of construction of the proposed improvement as shown in paragraph 30 are apportioned as 63% Federal and 37% local.

Federal Investment

Corps of Engineers: 63% of $250,000	$ 157,500
U.S. Coast Guard: Navigation Aids	2,200
Total Federal	$ 159,700

Non-Federal Investment

Cash Contribution: 37% of $250,000	$ 92,500
Public Landings (pier and float)*	30,000
Total Non-Federal	$ 122,500

*Self-liquidating

ESTIMATE OF ANNUAL CHARGES

42. Annual charges are based on an estimated project life of 50 years and an interest rate of 3-1/8% for both Federal and Non-Federal charges. Maintenance costs are based on experience with similar projects. An allowance of 2,500 cubic yards of maintenance dredging per year has been made. The annual charges for the improvement are shown below:

Federal Annual Charges

Interest and Amortization (0.03979 x $157,500)	$ 6,267
Maintenance: Channel and Anchorage	4,000
Navigation Aids	400
Total Federal	$ 10,667

Non-Federal Annual Charges

Interest and Amortization (0.03979 x $92,500)	$ 3,680
Total Annual Charges	$14,347

COMPARISON OF BENEFITS AND COSTS

43. Comparison of the evaluated benefits of $36,600 and annual charges of $14,347 indicates a benefit-cost ratio of 2.5 to 1.

PROPOSED LOCAL COOPERATION

44. The benefits to be derived from this improvement are considered to be 63 percent general and 37 percent local in nature, those accruing to commercial fishing being entirely general and those accuring to recreational craft being 50 percent general and 50 percent local. Therefore, it is considered that local interests should make a cash contribution of 37 percent ($92,500) of the construction cost of the recommended improvement. Also, in accordance with existing policies, local interests should be required to:

a. Provide, maintain and operate without cost to the United States two public landings or wharves with provisions for the sale of motor fuel, lubricants, and potable water open to all on equal terms. These landings are to be located in the deep water area south of Portsmouth-New Castle bridge between Shapleigh (Marvin) and Goat Islands and in Sagamore Creek downstream of the Sagamore Avenue bridge.

b. Provide necessary access roads, parking areas and other needed public use shore facilities and services open to all on equal terms.

c. Provide without cost to the United States all lands, easements and rights-of-way for the construction and maintenance of the project when and as required.

d. Hold and save the United States free from damages due to the construction work and maintenance of the project.

e. Make utility and other relocations or alterations as required for project purposes. A 12-inch diameter water main crosses

52. The resulting benefits to the commercial fishing and recreational fleets, present and prospective, indicate that the improvement is economically justified with a benefit-cost ratio of 2.5 to 1. Local interests have indicated that the improvement would meet their needs, and that the required local cooperation would be met. All agencies known to be interested have been consulted and have expressed no objection to the improvement. Fish and Wildife interests have stated that the project would not have any significant adverse affects on fish and wildlife resources provided the spoil material is removed to approved off-shore dumping grounds. The proposed project meets the criteria for authorization under Section 107 of the River and Harbor Act of 1960.

RECOMMENDATION

53. The Division Engineer recommends Federal improvement of the back channels on the south side of Portsmouth Harbor including Sagamore Creek, be authorized under provisions of Section 107 of the River and Harbor Act of 1960, to provide for:

(1) a channel 100 feet wide, 6 feet deep from Little Harbor through the Rye-New Castle drawbridge and then in a northerly direction between the mainland and Leachs Island to the natural deep water anchorage area south of the bridge between Shapleigh (Marvin) and Goat Islands.

(2) a channel 75 feet wide, 6 feet deep up Sagamore Creek to the Sagamore Avenue Bridge with anchorage in strips 75 feet wide, 6 feet deep, totaling 3 acres adjacent to the upper reach of the channel, as shown on the maps accompanying this report. The total project cost is estimated to be $280,000 excluding $2,200 for aids to navigation. Annual maintenance costs are estimated at $4,000 for the channels and anchorages and $400 for navigation aids. In view of the local nature of the recreational benefits, local interests should be required to contribute toward the cost of the project. The recommendation is made subject to the conditions that local interests:

a. Provide a cash contribution of 37 percent of the project construction cost ($92,500).

b. Provide, maintain and operate without cost to the United States two public landings or wharves with provisions for the sale of motor fuel, lubricants, and potable water open to all on equal terms.

One landing to be located adjacent to the natural deep water anchorage area south of the Shapleigh-Goat Island Bridge, the other on Sagamore Creek located downstream of the Sagamore Avenue Bridge.

c. Construct and maintain at the public landings, piers, floats, mooring facilities and berthing areas with depths commensurate to the Federal project.

d. Provide necessary access roads, parking areas and other needed public use shore facilities and services open to all on equal terms.

e. Provide without cost to the United States all lands, easements and rights-of-way necessary for the construction and maintenance of the project when and as required.

f. Hold and save the United States free from damages due to the construction work and maintenance of the project.

g. Make such utility and other relocations or alterations as are required for project purposes.

5 Incls
1. Map - 2 plates
2. Appendix A - Fish and Wildlife Report
3. Appendix B - Report of New Hampshire State Port Authority
4. Appendix C - U.S. Coast Guard Report
5. Appendix D - Letters by Local Interests

CORPS OF ENGINEERS

U. S. ARMY

EXISTING AUTHORIZED PROJECT

WIDENING CHANNEL AT HENDERSON PT. GANGWAY RK., BADGERS ISLAND & BOILING RK.

EXTENDING CHANNEL TO NEWINGTON TO PROVIDE A CHANNEL 35 FEET DEEP & 400 FEET WIDE AND TWO TURNING BASINS

CONSIDERED IMPROVEMENT NOT RECOMMENDED

CHANNEL 6 FEET DEEP, PORTSMOUTH BASIN CHANNEL AND ANCHORAGE 6 FEET DEEP

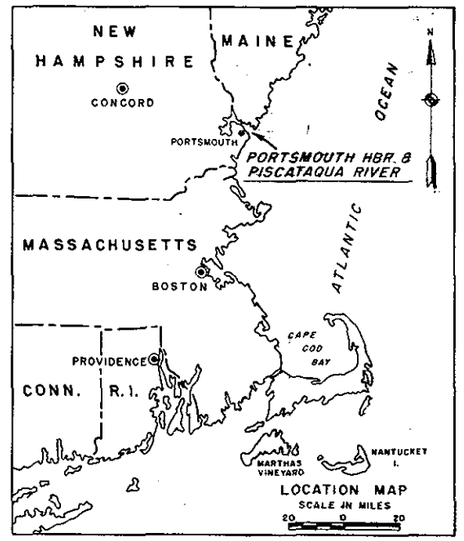
PORTSMOUTH WATERFRONT NORTH OF PIERCES ISLAND

IMPROVEMENT RECOMMENDED

CHANNEL 6 FEET DEEP-SHAPLEIGH ISLAND TO LITTLE HARBOR

CHANNEL 6 FEET DEEP, AND ANCHORAGE-IN SAGAMORE CREEK

EXISTING AUTHORIZED PROJECT LITTLE HARBOR, N.H.



U.S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS, WALTHAM, MASS.

PORTSMOUTH HARBOR & PISCATAQUA RIVER, ME. & N.H. BACK CHANNELS

SHEET 1 OF 2 SCALE IN FEET

1000 0 1000 2000 3000 4000

APPROVED: Wm. Hodes, CHIEF, ENGINEERING DIVISION

SUBMITTED: E. Price, CHIEF, PLANNING AND REPORTS BRANCH

R. W. Stavasky, CHIEF, RIVER AND HARBOR SECT.

Norman Whytell, PROJECT ENGINEER

OR BY A.D.C.

TR BY A.D.C.

CK BY

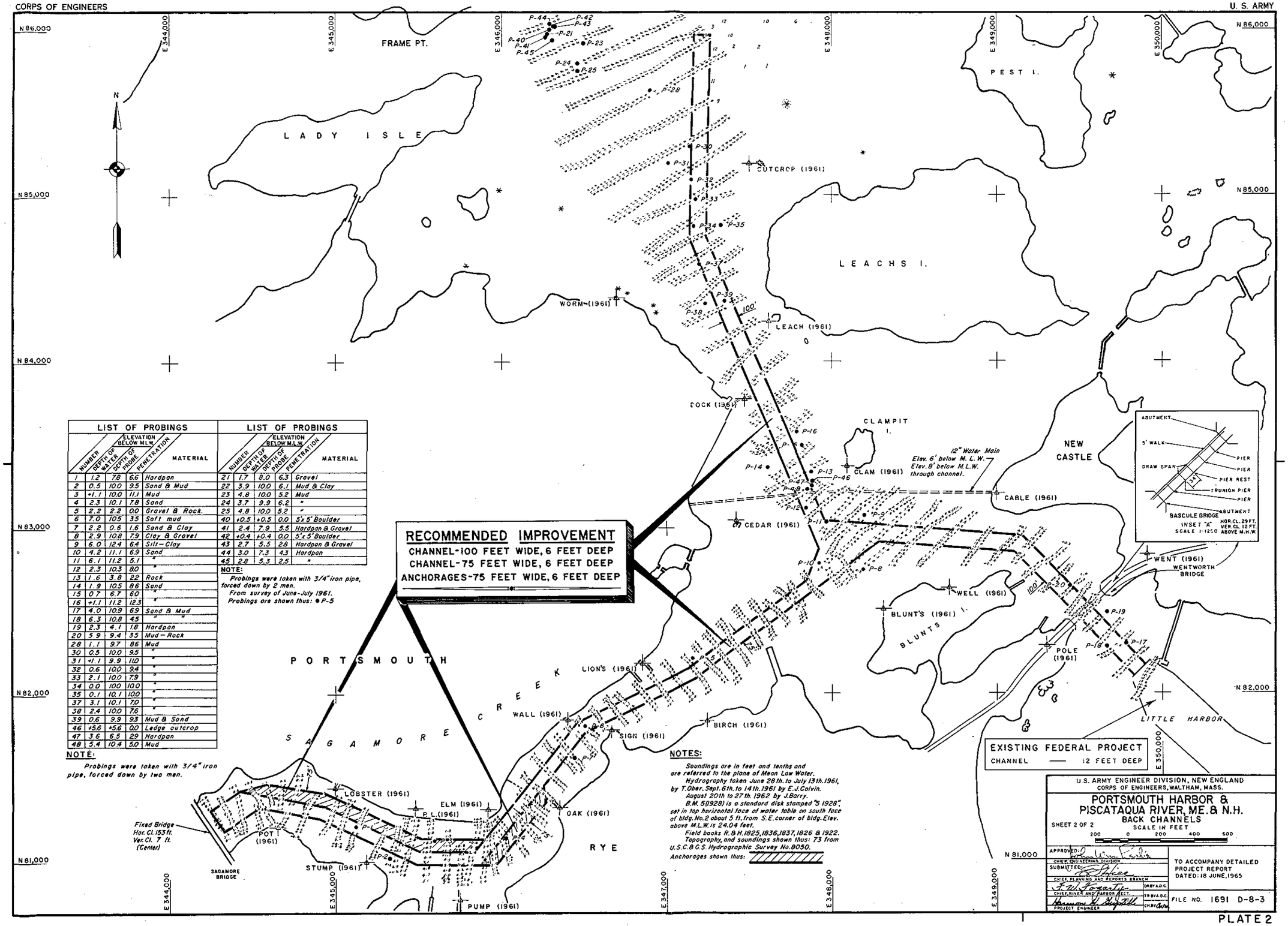
TO ACCOMPANY DETAILED PROJECT REPORT DATED: 18 JUNE, 1965

FILE NO 1691 D-8-3

PLATE 1

CORPS OF ENGINEERS

U. S. ARMY



LIST OF PROBINGS					LIST OF PROBINGS				
NUMBER	DEPTH OF WATER	ELEVATION BELOW M.L.W. DEPTH OF PROBE	PENETRATION	MATERIAL	NUMBER	DEPTH OF WATER	ELEVATION BELOW M.L.W. DEPTH OF PROBE	PENETRATION	MATERIAL
1	1.2	7.8	6.6	Hardpan	21	1.7	8.0	6.3	Gravel
2	0.5	10.0	9.5	Sand & Mud	22	3.9	10.0	6.1	Mud & Clay
3	+1.1	10.0	11.1	Mud	23	4.8	10.0	5.2	Mud
4	2.3	10.1	7.8	Sand	24	3.7	9.9	6.2	"
5	2.2	2.2	0.0	Gravel & Rock.	25	4.8	10.0	5.2	"
6	7.0	10.5	3.5	Soft mud	40	+0.5	+0.5	0.0	5'x 5' Boulder
7	2.2	0.6	1.6	Sand & Clay	41	2.4	7.9	5.5	Hardpan & Gravel
8	2.9	10.8	7.9	Clay & Gravel	42	+0.4	+0.4	0.0	5'x 5' Boulder
9	6.0	12.4	6.4	Silt-Clay	43	2.7	5.5	2.8	Hardpan & Gravel
10	4.2	11.1	6.9	Sand	44	3.0	7.3	4.3	Hardpan
11	6.1	11.2	5.1	"	45	2.8	5.3	2.5	"
12	2.3	10.3	8.0	"					
13	1.6	3.8	2.2	Rock					
14	1.9	10.5	8.6	Sand					
15	0.7	6.7	6.0	"					
16	+1.1	11.2	12.3	"					
17	4.0	10.9	6.9	Sand & Mud					
18	6.3	10.8	4.5	" "					
19	2.3	4.1	1.8	Hardpan					
20	5.9	9.4	3.5	Mud-Rock					
28	1.1	9.7	8.6	Mud					
30	0.5	10.0	9.5	"					
31	+1.1	9.9	11.0	"					
32	0.6	10.0	9.4	"					
33	2.1	10.0	7.9	"					
34	0.0	10.0	10.0	"					
35	0.1	10.1	10.0	"					
37	3.1	10.1	7.0	"					
38	2.4	10.0	7.6	"					
39	0.6	9.9	9.3	Mud & Sand					
46	+5.6	+5.6	0.0	Ledge outcrop					
47	3.6	6.5	2.9	Hardpan					
48	5.4	10.4	5.0	Mud					

NOTE:

Probings were taken with 3/4" iron pipe, forced down by two men.

NOTE:

Probings were taken with 3/4" iron pipe, forced down by 2 men. From survey of June-July 1961. Probings are shown thus: ● P-5

RECOMMENDED IMPROVEMENT

CHANNEL-100 FEET WIDE, 6 FEET DEEP

CHANNEL-75 FEET WIDE, 6 FEET DEEP

ANCHORAGES-75 FEET WIDE, 6 FEET DEEP

NOTES:

Soundings are in feet and tenths and are referred to the plane of Mean Low Water. Hydrography taken June 28th. to July 13th. 1961, by T. Ober. Sept. 6th. to 14th. 1961 by E. J. Colvin. August 20th to 27th. 1962 by J. Barry.

B.M. 5 (1928) is a standard disk stamped "5 1928", set in top horizontal face of water table on south face of bldg. No. 2 about 5 ft. from S.E. corner of bldg. Elev. above M.L.W. is 24.04 feet.

Field books R. & H. 1825, 1836, 1837, 1826 & 1922. Topography, and soundings shown thus: 73 from U.S.C. & G.S. Hydrographic Survey No. 8050.

Anchorages shown thus:

EXISTING FEDERAL PROJECT

CHANNEL —— 12 FEET DEEP

U.S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS, WALTHAM, MASS.

PORTSMOUTH HARBOR & PISCATAQUA RIVER, ME. & N.H.

BACK CHANNELS

SHEET 2 OF 2

SCALE IN FEET

200 0 200 400 600

APPROVED:
CHIEF, ENGINEERING DIVISION

SUBMITTED:
CHIEF, PLANNING AND REPORTS BRANCH

CHIEF, RIVER AND HARBOR SECT.

Harmon V. Bigelow
PROJECT ENGINEER

ORBY A.D.C.

TR BY A.D.C.

CH BY Chf.

TO ACCOMPANY DETAILED PROJECT REPORT DATED: 18 JUNE, 1965

FILE NO. 1691 D-8-3

PLATE 2

APPENDIX "A"

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
59 Temple Place
Boston, Massachusetts

December 5, 1961

Division Engineer
New England Division
U. S. Army, Corps of Engineers
424 Trapelo Road
Waltham 54, Massachusetts

Dear Sir:

This letter constitutes our conservation and development report on the proposed navigation improvements for Portsmouth Harbor, New Hampshire, and has the concurrence of the New Hampshire Fish and Game Department.

The improvements under consideration consist of two separate items, i.e.:

1. Widening and extending the existing deep-draft vessel channel in the Piscataqua River.

2. Provision of small-boat channels, 100 feet wide by 8 feet deep, between Portsmouth Harbor and Little Harbor, and up Sagamore Creek to State Highway 1A bridge.

Some commercial fishery benefits are anticipated as a result of the construction of the small-boat channels. The proposed small-boat channels would allow the lobster fishermen to travel to their fishing grounds via Little Harbor at all times, rather than only at high tide. Under existing conditions the fishermen have to use the main boat channel and travel around New Castle Island at low tide. The principal commercial fishery benefit would be a savings in operating costs to the lobster fishermen. We are not in a position to place a monetary value on this type of benefit.

With regard to the deep-draft vessel channel in the Piscataqua River, we anticipate no significant adverse effects on the fish and wildlife resources as a result of construction nor from spoil material if placed at sea, except in the Isles of Shoals area. The Isles of Shoals area off Portsmouth Harbor has supported an early winter herring fishery, and we have some indication of herring spawning near the islands in this area. No spoil material should be placed in the Isles of Shoals area.

With regard to your plans for the small-boat channels, we anticipate no significant adverse effects on fish and wildlife resources as a result of dredging operations. We understand that the spoil material will be mud and sand and probably will be placed on land or in tidal areas. The placement

of this spoil material could adversely effect fish and wildlife resources. Disposal of this spoil material will be least damaging to fish and wildlife resources if it is placed on areas outlined on Plate I.

Therefore, we recommend--

1. That spoil material from the deep-draft vessel channel not be placed in the Isles of Shoals area.

2. That all spoil material from the small-boat channels be placed in those spoil areas designated on Plate I.

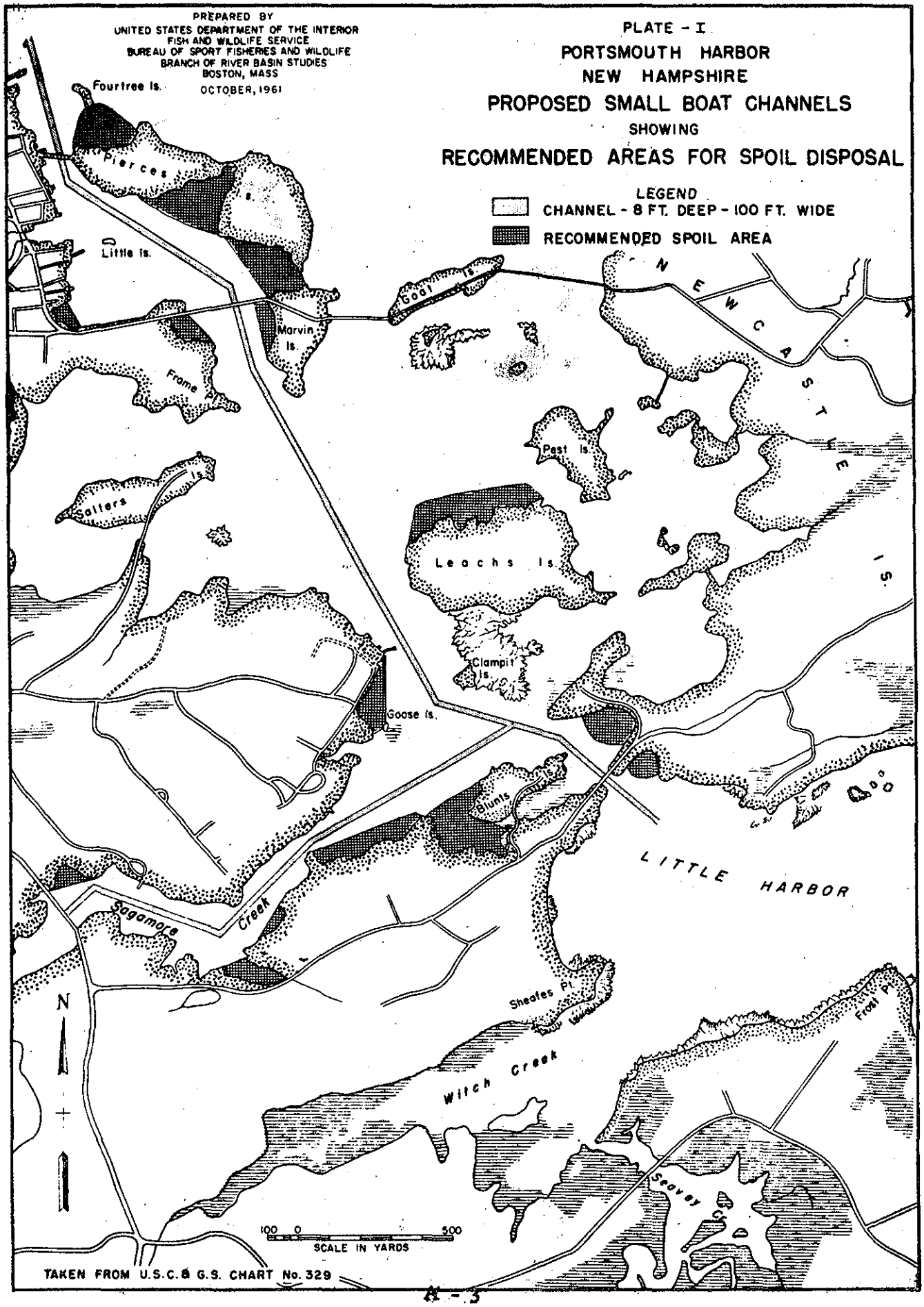
No further studies by this Service will be required if spoil material is placed on the recommended areas. Should additional spoil disposal areas be selected, we would like to have notification sufficiently in advance of contract letting to prepare a new fish and wildlife report.

Thank you for the opportunity to report on this plan of improvement.

Sincerely yours,

E. W. Bailey
Acting Regional Director
Bureau of Sport Fisheries & Wildlife

John T. Gharrett
Regional Director
Bureau of Commercial Fisheries


PREPARED BY
UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
BRANCH OF RIVER BASIN STUDIES
BOSTON, MASS
OCTOBER, 1961
PLATE - I
PORTSMOUTH HARBOR
NEW HAMPSHIRE
PROPOSED SMALL BOAT CHANNELS
SHOWING
RECOMMENDED AREAS FOR SPOIL DISPOSAL
LEGEND
CHANNEL - 8 FT. DEEP - 100 FT. WIDE
RECOMMENDED SPOIL AREA
Fourtree Is.
Pierces Is.
Little Is.
Goat Is.
Marvin Is.
Frame Is.
Salters Is.
Pest Is.
Leachs Is.
Clampit Is.
Goose Is.
Blums Is.
NEWCASTLE IS.
LITTLE HARBOR
Sagamore Creek
Sheates Pt.
Witch Creek
Frost Pt.
Seavey Is.
N
100 0 500
SCALE IN YARDS
TAKEN FROM U.S.C.& G.S. CHART No. 329

NEW HAMPSHIRE STATE PORT AUTHORITY

With reference to the study of navigational improvements in the Portsmouth - Back Channel area, described in a letter of 17 August 1961 from the Division Engineer, U. S. Army Corps of Engineers, New England, this Authority recommends an anchorage area and small boat channels to follow the areas indicated by dotted lines on the attached chart.

It is further recommended, that if the study receives favorable endorsement as a Federal project, the Commander, First Coast Guard District be consulted in the matter of installing appropriate aids to navigation at or near the positions indicated on the attached chart and described in paragraph I. C, below.

Channels connecting the points detailed below are considered most desirable unless ledge or other conditions require changes.

I. DESCRIPTION OF IMPROVEMENT DESIRED

A. Little Harbor to Portsmouth Harbor: (All channels 100 feet wide by 8 ft.deep)

(1) Beginning at a point 100 yards south of Nun Buoy No. 8 in Little Harbor, remove shoal to a depth of 8 feet on a line bearing 124 degrees true from Can Buoy #3.

(2) Thence, beginning at the 6 foot shoal approximately 100 yards NW of buoy "C3", through the Bascule Bridge to the 12-foot natural basin northerly of Blunt's Island. Rocks, causing damage to small craft, have been reported within a few feet and southeast of the draw span of this bridge in the channel.

(3) A triangular basin, bounded in general by the following: (a) northeasterly by a line beginning at a point bearing 270 degrees true and distant 650 yards from the cupola of the Wentworth Hotel and running to a point approximately 100 yards SW of Clampit Island at the southerly limit of the pipeline area, and (b) bounded westerly by a line bearing 260 degrees, true, and 925 yards from the cupola on the Wentworth Hotel, and running NE to a point

bearing 244 degrees, true, and 100 feet distant, from the position previously established at the southerly limit of the pipeline area.

(4) From the latter point in a direction approximately 344 degrees true (north, magnetic) toward the natural basin beginning at a point abreast of the three rocks which are approximately 175 yards NNW of the west tangent of Leach's Island.

(5) From the latter point and using as its NE boundary, a line connecting the westerly rock in the latter group in a direction 306 degrees true, to a rock approximately 115 yards from the southerly tip of Marvin Island.

(6) From the latter point to the center span of the bridge between Frame Point on the mainland and Marvin Island, a channel leading to an anchorage basin to be established in the area southwest of Pierce's Island and bounded by the Portsmouth waterfront on the west, by Frame Point on the south, and connected to the main harbor on the east by a channel to be established through the gut between Pierce Island and Marvin Island.

(7) Widen the existing channel that runs NNW from the Pierce Island bridge by approximately 100 feet to provide anchorage, clear of the fairway, for commercial lobstermen in that area. Use the shoal between Pierce's and Fourtree Islands as a spoil area, if feasible, to provide added protection for the anchorage. Detailed plans for development of this area are being prepared by the Planning Dept., City of Portsmouth, and will be forwarded at a later date.

B. Sagamore Creek to the Sagamore Avenue Bridge

(1) Beginning at a point at the westerly limit in the natural basin north and west of Blunt's Island, a channel 8 feet deep by 100 feet wide following the center line of the creek to the Sagamore Bridge.

(2) Remove the westerly rock in the narrows approximately 625 yards east of the Sagamore Bridge.

C. Navigational Aids to be Recommended:

(1) The installation of suitable navigational aids will be recommended to the Commander, First Coast Guard District at the following points:

(a) The rock, southwest of Clampit Island, which would form the turning point of the proposed channel.

(b) The westernmost rock in the cluster of three, NNW of the westerly tangent of Leach's Island

(c) The rock SSW of Marvin Island

(d) At a point bearing 260 degrees true and 925 yards from the cupola of the Wentworth Hotel marking the easterly entrance to Sagamore Creek.

It is noted that positions of the rocks mentioned in (a) and (b) above are not the same in USC & GS Chart No. 329 (revised 12/8/58) and the First Edition of Chart 211 which replaces it.

2. DESCRIPTION OF PRESENT NAVIGATION DIFFICULTIES:

(a) Tidal Currents:

The Piscataqua River and Lower Portsmouth Harbor, through which the extensive tidal basin of Great Bay and its six main tributary streams are funneled is one of the fastest flowing tidal waterways of any commercial port in northeastern United States. Due to the natural depth of the main channel and the formation of the river banks, the main flow of current passes north and east of the natural barrier formed by Pierce's Island. Winds from the southerly quadrants cause a severe tide rip at the main harbor entrance at the strength of the ebb tide. Commercial fisherman returning to the docks along the city waterfront and yachtsmen proceeding to Newington, Durham, Dover, and Great Bay can take advantage of the sheltered waters within Little Harbor and the Back Channel area only at the higher stages of the tide.

(b) Anchorage Areas:

Due to the marked increase, both in pleasure boating and full and part-time lobstering that has occurred since WWII, anchorage areas have become overcrowded to the point where larger yachts can no longer obtain berths or mooring areas on the New Hampshire side of the main harbor. The only anchorage areas available to commercial fishermen, within reasonable distance of their business locations are (1) in the restricted waters between Seward's Rocks near the main harbor and Little Island, southwest of Pierce's Island and (2) Sagamore Creek. Both areas are fairways and craft moored therein severely hamper the passage of other boats.

Yachtsmen are limited on the New Hampshire side of the main harbor to the special anchorage areas east and west of Salamander Point and to float-stage slips at the Portsmouth Yacht Club west of Salamander Point. Both locations afford little shelter from winds from the northerly quadrants, and are subjected to heavy wash from ocean-going vessels traversing the narrow waters of the lower harbor. Moreover, limiting depths in the special anchorage area are such that only the smaller craft can be anchored there.

Little Harbor, between New Castle and Rye, while providing good shelter and adequate depths of water for larger craft, has irregular shoal areas, and heretofore, has had no public access or landing facilities. A State-supported recreational area and public landing is planned for the former Fort Dearborn property in the near future.

(c) Hazards to Navigation:

Small craft have suffered damage from rocks mentioned in paragraphs IA. (2); C. (1) (a) (b) (c) and have grounded on the shoal at the entrance to Sagamore Creek.

3. LANDING AND SERVICING FACILITIES IN THE HARBOR

a. Commercial Landings

Other than the marina, described in paragraph 3. c. below, commercial landings are restricted to privately owned floats and small piers along the city waterfront west of Pierce's Island, maintained by companies and individuals engaged in lobster fishing.

b. Recreational Landings

Existing recreational landings, shown on the attached chart, are located on the city waterfront at Prescott Park. One consists of a basin area, west of Seward Rocks at the northerly entrance to the Back Channel area, constructed of granite retaining walls with stairs leading to the park. The basin has three berths, approximately 75 feet in length in 5 feet of water. A second float stage is located immediately north of the Pierce's Island Bridge during the boating season and provides berthing space approximately 100 feet in length with a least depth of 5 feet at mean low water. Neither landing has fueling or potable watering facilities.

A launching ramp for trailered boats has been constructed adjacent to the channel near the westerly end of Pierce's Island. This ramp is now heavily patronized by community and regional recreational boat owners.

All of the above facilities are owned and maintained by the City of Portsmouth as free recreational facilities. All landings are in good condition.

c. Boat Yards and Repair Facilities

A boat yard, lift and repair facility, operating under the name of "Mike's Marina" owned by Mr. Michael Kuchtey is located on the south side of Sagamore Creek, approximately 100 yards east of the Sagamore Bridge. The yard has a marine travel lift which can accommodate boats up to 43 feet in length and 15 long tons in weight.

The yard repairs wooden hull vessels and services gasoline and diesel marine engines. The yard has facilities for storing sixteen 25-foot boats under cover and one hundred boats up to 100 feet in length in the open. It has berths for 40 small craft alongside and moorings for an additional 40. The average number of boats serviced last year was stated as 150 and the average number of boats stored last year was 125. Approximate gross valuation of business last year was reported as $100,000. The owner states that his business has doubled during the last four years.

2. New Facilities Planned:

Four new recreational boating facilities are planned for the area encompassed by the proposed project:

(1) The State Port Authority in cooperation with the State Recreation Division are planning the construction of a double launching ramp, flanked by piers and float stages in the vicinity of Witch Creek at the State-owned Fort Dearborn site in the near future. Parking facilities for 100 cars and trailers are planned for the initial installation, with space reserved to double these facilities at a later date. Fueling service both gasoline and diesel, and potable water connections on both piers are planned.

(2) The City of Portsmouth will expand the present launching ramp on Pierce's Island by approximately 75 feet to accommodate the increasing volume of trailer-boat traffic.

(3) In addition, a second ramp is planned for the north side of the Island in the cove east of Gangway Rock.

(4) Another public landing is presently under construction at the granite block abutment of the former Pierce's Island bridge site. The berth has been dredged to 4 feet at MLW. Float stages will be secured to the face of the abutment to provide a small-boat berth approximately 85 feet in length.

(5) The Planning Board of the City of Portsmouth on August 11, 1960, unanimously passed a resolution wherein it was recommended to the New Hampshire Port Authority and the U. S. Army Corps of Engineers that the following improvements be considered:

(a) Provision for more anchorage depth and area within the Pierce Island basin

(b) The dredging of the gut between Pierce Island and the so-called Marvin Island

(c) The dredging and improvement of such other shore line areas within the aforesaid area which are necessary for Portsmouth's commercial and recreational uses.

Portsmouth's Master Plan Studies of 1961 (Chapter 4, "Land Use Plan, Marine Business", pages 130, 131) refers directly to the investigations and needs for harbor and channel improvement along the Portsmouth waterfront, the Pierce Island Basin, and the Little Harbor area.

The use of Pierce Island for trailer-boat traffic and open-space public use is recognized as rapidly increasing. It is anticipated that Pierce Island's westerly cove and the shoal area between Pierce Island and Four Tree Island be designated as "spoil areas" thus allowing the development of further public small-boat facilities.

4. PRESENT USE OF THE HARBOR

a. Fishing Industry The area included in the proposed project encompasses practically all of the companies and boats engaged in various phases of the fishing industry, limited at this time, mainly to lobstering. Some fin fish are handled through the port at seasonal intervals. Lobster dealers who operate their own boats are listed below:

Blue Fin Fish Market	37 Marcy St., Portsmouth
Henry's Lobster Pound	Wentworth Rd., Portsmouth
LaCava Lobster Company	Lafayette Rd., Portsmouth
Newick Lobster Company	Ceres St., Portsmouth
Portsmouth Lobster Company, Inc.	State St., Portsmouth
Earl M. Sanders Lobster Co.	Pray St., Portsmouth

Wharves in the area are not identified by name. Shell fish and some fin fish are handled at all of the commercial wharves along the eastern end of the city waterfront. There are two lobster pounds on Sagamore Creek.

Total Fishing Commerce The local harbor master reported 264 long tons of lobster and 7 long tons of fin fish landed in the included area in 1960; and 219 long tons of lobsters landed during the first through third quarters of calendar 1961.

Present and Anticipated Fishing Fleet Owners of fishing craft, mooring area and the length of craft are tabulated below:

A. East of Sagamore Bridge

Owner	Residence	LOA
John Golter	Wentworth Rd., Ports.	35 ft.
Richard Stickney	Off Sagamore Rd., Ports.	35 ft.
Michael Kuchtey	Wentworth Rd., New Castle	35 ft.
Herbert Blanchard	Exeter	35 ft.
Leon Deu	North Hampton	35 ft.
Robert McDonough	Sagamore Rd., Ports.	35 ft.
Tracy Tarr	Wentworth Rd., New Castle	40 ft.
John Gailey	Islington St., Ports.	30 ft.

B. West of Sagamore Bridge

Edward Warrington	Kingston	37 ft.
Virgil Bagley	School St., Ports.	35 ft.
Neal Eldredge	Lincoln Ave., Ports.	35 ft.

Peter Swanson	Harrison Ave., Ports.	35 ft.
Geno J. Marconi	Marcy St., Ports.	35 ft.
Joseph Marconi (2 boats)	New Castle Ave., Ports.	35 ft.

Lobster Boats (O. B.) - Sagamore Creek

Theodore Williams	Little Harbor Rd., Ports.	15 ft.
William Morrison	Rye	15 ft.
Blanchard, Jr.	Exeter	15 ft.
Michael Flannigan		15 ft.
Clifton Seavey	Colonial Drive, Ports.	15 ft.
William Hathaway	Rye	15 ft.
Larry Ciotti	Portsmouth	15 ft.
Burdette Barrett	Hampton	15 ft.
Ned Jennings	Rye	15 ft.

Lobster Boats - Portsmouth South and East End Areas

William T. Rose	Gates St., Ports.	35 ft.
Wylie Brewster	Atkinson St., Ports.	35 ft.
Alex. Babula	Islington St., Ports.	35 ft.
Samuel Pendleton, Jr.	Partridge St., Ports.	35 ft.
Samuel Pendleton, Sr.	Partridge St., Ports. (O.B.)	15 ft.
Walter Ross	Ball St., Ports.	35 ft.
Anthony Raduazo	Gardner St., Ports.	25 ft.
George Ricker	Pickering St. (O. B.)	15 ft.
Frendo Marconi	Off Marcy St., Ports.	35 ft.
William Marconi (2 boats)	Shapleigh Island	35 ft.
Harold Burke	New Castle Ave. (O.B.)	15 ft.
Roger Gagnon		30 ft.
Robert Muchmore (Jos. Marconi's boat)	Portsmouth (O.B.)	15 ft.

General Information

(1) Due to congestion in mooring areas along the city waterfront, the larger lobster boats are operating out of Sagamore Creek in increasing numbers. Four-foot shoals in the vicinity of the Wentworth Bridge and west of Clampit and Leach's Islands incur delays in their operations of about 2 hours during normal low water and about 3.5 hours during extreme low tides.

(2) As a part of the Port Authority plans for port development, Frederic R. Harris, Inc., consulting engineers, New York City, have been retained to plan the development of Port Authority land on Noble's Island and waterfront property at the north end of Market Street in Portsmouth. The northern tip of Noble's Island will be designed as a State fish pier to handle U. S. and foreign flag trawlers and carriers within a foreign trade zone. The plan is intended to foster the growth of a local fishery and related industries. A national mail advertising campaign will be aimed at attracting a fish-freezing plant to the area. Ocean distances from Portsmouth to Georges, Brown's and the Grand Banks compare favorably with distances to other New England based fishing fleets. The Noble's Island site is located on Routes US 1 and 95 for convenient overland truck pick-up and is served by rail sidings from the Boston and Maine Railroad. It is considered likely that this development will increase boat traffic in the Back Channel area.

b. Recreational Boating

(1) Recreational boats registered in the immediate and surrounding area that would benefit from the improvement, based on registration for the period ending 30 June 1961 are:

Type	Length	No.	Depreciated Value Average	Depreciated Value Total
Outboards	Under 16'	650	$ 300.00	$195,000.00
Inboards	Under 16'	7	500.00	3500.00
Outboards	16' - 25'	468	1800.00	842,400.00
Inboards	16' - 25'	110	3500.00	385,000.00

Outboards	26' - 40'	2	2800.00	4,800.00
Inboards	26' - 40'	130	5000.00	650,000.00
Inboards	40' - 65'	12	12000.00	144,000.00
	Totals:	1379	-	$ 2,224,700.00

The recreational fleet numbered 1680 pleasure craft registered through 30 June 1961 in tidal waters of the State according to U. S. Coast Guard machine records. Due to the limited number of sheltered harbors and the short length of New Hampshire's coast line, a substantial number of the above craft traverse the Portsmouth Harbor, Piscataqua River, and Little Bay through Furber Strait at some time during each boating season.

(2) The Piscataqua River, Great Bay and tributary rivers afford approximately 50 miles of inland sheltered water for shallow draft, recreational boating. That the area is not more extensively enjoyed is due mainly to the absence of adequate aids to navigation and hitherto, adequately charted areas in the upper reaches of the tributary streams. The 1960 edition of the USC&GS Chart 211, however, with greater coverage of this picturesque inland waterway, has increased outboard boating traffic to a marked degree. This Authority will undertake the installation and maintenance of private aids to navigation in areas beyond the normal scope of operations of the US Coast Guard to encourage greater enjoyment of these extensive natural waterways.

If the proposed improvement is completed, together with the proposed 12-foot Federal project in Little Harbor, it would provide sheltered access at all stages of the tide to the city's business district for small craft and tenders from the larger yachts that may anchor in Little Harbor. It would also provide a great increase in anchorage and float-stage moorings for pleasure boats in the Pierce Island basin immediately adjacent to the city waterfront.

The transient fleet, particularly trailered outboards, is expected to increase substantially when additional launching ramps are completed.

Greater use of the anchorage area at Little Harbor is anticipated when the 12-foot Federal project, together with the State sponsored recreational area and public landing at Fort Dearborn become usable.

c. Charter Boats

At present there is only one charter and excursion boat that is able to use the Back Channel area, and then only at high water. It is expected that the number of excursion boats will increase when the historical restoration of "Strawbery Banke" along the city waterfront is completed. Part of the colonial project includes mooring a full scale reproduction of the frigate "Ranger" in the channel project area.

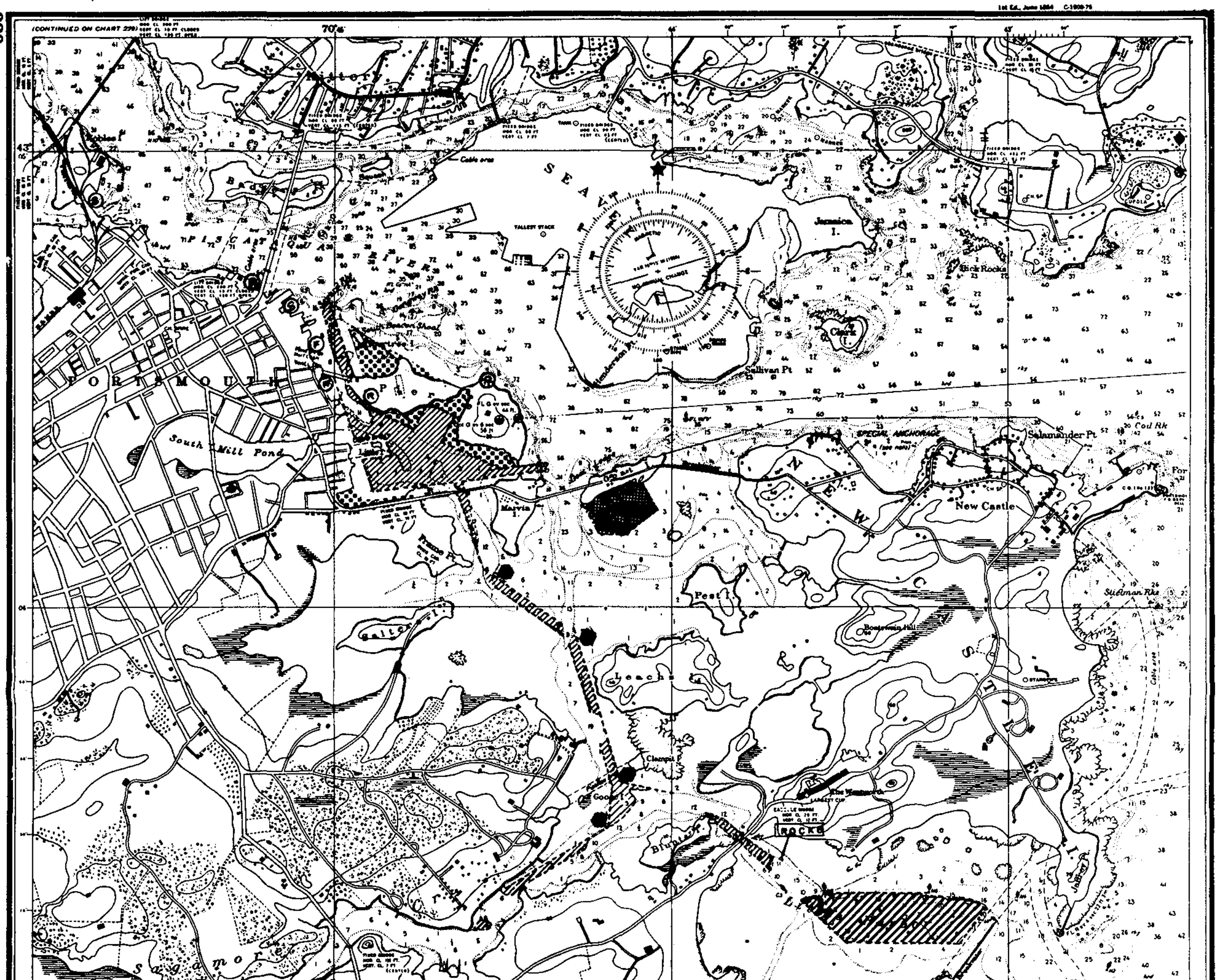
5. Local Contributions Toward The Proposed Harbor Improvement

For the most part, the proposed Back Channel improvement, falls within the city limits and boundaries of the City of Portsmouth. Only a small area is included in the Town of Rye. The subject of local, city and State participation has been discussed in detail with the City Manager and the City Planner and both have indicated strong support for the entire project. It is possible that the area bordering Pierce's Island can produce sufficient income from slip rentals over a period to defray part of subsidiary costs for bulkheading and bank stabilization.

However, until bottom probes and samples have been taken to determine the feasibility of hydraulic dredging, enabling cost estimates to be established, no definite statement of degree of local city and State financial participation can be made.

In the event that cost estimates appear prohibitive when these figures become available, the matter of breaking the total project into two or more phases will be investigated and recommended.

****


329
(CONTINUED ON CHART 229)
1st Ed., June 1954 C-1000-75
70°45'
43°05'
PISCATAQUA RIVER
PORTSMOUTH
SEAVEY
Badger I.
Goat I.
Jamaica I.
Clark I.
Sullivan Pt
Salamander Pt
Cod Rk
Stillman Rks
Henderson Pt.
South Beacon Shoal
South Mill Pond
Marvin I.
Pest I.
Leachs I.
Clampit I.
Goose I.
Blunts I.
Boatswain Hill
New Castle
NEW CASTLE
Jaffrey
Shaefer Pt.
Frost Pt.
Witch Creek
Seavey Cr.
Odiornes Pt.
Sagamore Cr.
SPECIAL ANCHORAGE
TALLEST STACK
CUPOLA
ROCKS
Cable area
PROPOSED
FORT DEARBORN
STATE RECREATION
AREA
PROPOSED PROGRAM
PORTSMOUTH HARBOR
IMPROVEMENTS
12-1-1961
N.H. STATE PORT AUTHORITY — PORTSMOUTH PLANNING BOARD
LEGEND
EXISTING FACILITIES
PUBLIC LANDINGS: SHORE-PIER
" " : FLOATS
" " : RAMPS
PROPOSED IMPROVEMENTS
CHANNEL IMPROVEMENT AREAS: 8 FT.
" " " " : 12 FT.
(SEP. FED. PROJECT)
SPOIL AREA
PLANNED FILL & SPOIL AREA
(TO BE FURTHER DEVELOPED)
NAVIGATION AIDS
SCALES
MERCATOR PPOJECTION
1:10,000
NAUTICAL MILES
0
1/2
YARDS
100
0
500
1000
FROM U.S.G.S. CHART: 329

TREASURY DEPARTMENT
UNITED STATES COAST GUARD

Address reply to:
COMMANDER (o)
1ST COAST GUARD DISTRICT
1400 CUSTOMHOUSE
BOSTON, MASS. 02109

11400
12 May 1965

From: Commander, First Coast Guard District
To: Division Engineer, U. S. Army Engineer Division
New England Corps of Engineers, 424 Trapelo Road
Waltham, Massachusetts

Subj: Small Navigation Project, Back Channels, Portsmouth-Rye, New Castle area, New Hampshire

1. The plan of improvement will not directly affect Coast Guard operations in the area. No suggestions are offered.

2. It has been determined that if the improvement is accomplished, thirteen small buoys will be required. First cost is estimated at $2,200.00, and annual maintenance at $400.00. The location of the eleven buoys has been shown on plate 3, enclosed. Two buoys will be required as spares.

B. E. KOLKHORST
By direction

Encl: (1) Plate 3

Copy to:
COMDT (OAN) (w/encl)

City of Portsmouth, New Hampshire

CITY HALL · · · 126 DANIEL STREET

March 2, 1965

Colonel E. J. Ribbs
Acting Division Engineer
U. S. Army Corps of Engineers
New England Division
424 Trapelo Road
Waltham, Massachusetts

Dear Colonel Ribbs:

The need for a Federal navigation project to improve the small-boat channels in the Portsmouth-New Castle area was explained by Mayor Timothy J. Connors at the 10 February 1965 meeting with New Hampshire Port Authority representatives and engineers from your office. As stated at that meeting, the City of Portsmouth and the State Port Authority consider that the needs of this area would be best served by a channel 100 feet wide, 6 feet deep from Little Harbor through the Rye-New Castle drawbridge north to the deep water area south of the Portsmouth-New Castle bridge between Shapleigh and Goat Islands, and a channel 75 feet wide, 6 feet deep up Sagamore Creek to the highway bridge. Open anchorage areas 6 feet deep are needed by the Sagamore Creek lobster boats. Federal channel improvements are not needed for the developments now planned for the Portsmouth waterfront and the Pierce Island Basin.

The City of Portsmouth will provide a public landing on Sagamore Creek within 500 yards of the highway bridge. The landing will have a dock or float with berths commensurate with the Federal channel depth, and parking space sufficient to assure public access to the channel, and it will be open to all on equal terms. We expect the New Hampshire Port Authority will provide a public landing on the deep water area below the Portsmouth-New Castle bridge.

The City of Portsmouth will contribute as necessary to the cost of construction of such a project. It is understood that the project cost, while subject to change, is now estimated to be less than $200,000 and that the local share will be less than 50 percent of the total. It is expected that the local share will be divided between the City and the State. We will appreciate being informed as soon as possible of the final amount expected for the cash contribution so that we may complete our budgetary planning.

We expect no difficulty in providing these and other nominal requirements for local cooperation on a Federal project. Suitable arrangements will be made to provide the legal assurances you will need after you have completed the engineering designs and final cost estimates. It is hoped that this letter, with that of the New Hampshire Port Authority, will enable you to continue studies to develop the Federal small-boat navigation project needed for our area.

Sincerely yours,

Robert C. Violette
City Manager

RCV:1

NEW HAMPSHIRE STATE PORT AUTHORITY
555 MARKET ST., PORTSMOUTH, N. H. 03802 TELEPHONE 436 - 8500

EUGENE P. SOLES, CHAIRMAN — CARL M. LOUGEE, VICE CHAIRMAN — JOHN E. SEYBOLT
HUGH G. HAMILTON — FRANK W. FATE — JOHN F. ROWE — RALPH T. HARRIS

A. DICKSON SMITH
EXECUTIVE DIRECTOR

February 24, 1965

Colonel E. J. Ribbs
Acting Division Engineer
U. S. Corps of Engineers, N. E.
424 Trapelo Road
Waltham, Massachusetts

Dear Colonel Ribb:

On Wednesday, February 10, a meeting was held in the Portsmouth City Hall at which the following were in attendance: Messrs. Alan R. Chandler and H. H. Guptill, representing the Planning and Reports Branch of the River and Harbor Section of the Corps of Engineers; Mayor Timothy J. Connors and Mr. Frank Butterworth, Member of City Council, representing the City of Portsmouth; Mr. Eugene P. Soles, Chairman, Mr. John E. Seybolt, Member, and Mr. A. Dickson Smith, Director, representing the New Hampshire State Port Authority. The subject of the meeting was to discuss navigation improvements for small craft in the Portsmouth-New Castle-Rye Area, and to bring up-to-date any pieces of correspondence and the Survey Review of Reports dated February 26, 1964 on this subject.

It was concluded by the group in attendance at the meeting that that part of the original program calling for a dredged channel between Pierces Island and the City of Portsmouth was not justifiable at this time. The group feels that there is a definite need and interest for dredging a navigable channel commencing in the area of Little Harbor by the Wentworth Bridge up through Little Harbor on into the vicinity of Goat Island, as well as channel improvements up Sagamore Creek as far as Sagamore Bridge.

The subject of consideration as to the location for two public landings was discussed on the basis of locating one of these public landings in the vicinity of Goat Island using some of the dredged material properly placed for said public landing. The second public landing would be on Sagamore Creek somewhere in the area approximately no further than 500 yards downstream of Sagamore Bridge.

During the meeting, it was mentioned that in the past some of the lobstermen having moorings on Sagamore Creek objected to a channel 100 feet wide, which would leave little or nothing in the way of anchorages, and it was suggested that perhaps a 75 foot wide channel would be sufficient with some anchorages on either side of such a channel.

The Engineers advised that they felt this project as now being discussed would run at an estimated cost of under $200,000, and therefore could be projected under the authority of Section 107 of the 1960 River and Harbor Act. As in the past, the cost for this desired improvement would be borne on a 50-50 Federal,

State and/or Local interests basis, and since it may be accomplished under the authority of Section 107, it is our understanding that the Federal share of the necessary funds is probably already available, and after local interests decide as to the definite location of the Sagamore Creek landing, and the Engineers advise of the final details of the program and bidding, that the project could be accomplished during the Year 1966.

We appreciate the Corps' continued interest in this project, as well as in this area, and await any additional developments or requirements called for from your office.

Very truly yours,

A. Dickson Smith

A. Dickson Smith
Executive Director

Copies: Governor John W. King
State Senator Douglass E. Hunter
State Senator Eileen D. Foley
Mayor Timothy J. Connors, Portsmouth
Frank Butterworth, City Council, Portsmouth
Malcolm J. Chase, Staff Projects Engineer (State)
Members of Port Authority
Austin F. Quinney, Governor's Councillor

STATE OF NEW HAMPSHIRE
CONCORD

JOHN W. KING
GOVERNOR

October 20

1965

Colonel E. J. Ribbs
Acting Division Engineer
U.S. Army Engineer Division
424 Trapelo Road
Waltham, Massachusetts 02154

Dear Colonel Ribbs:

This will acknowledge receipt of your letter of August 19, 1965, relating to the proposed joint State-Federal dredging project in the Back Channel-Sagamore Creek Area of Portsmouth and Newcastle.

The proposed project appears to be of benefit to the recreational and commercial marine interest in the Seacoast area of the State and should contribute measurably to the economic advantages derived from such activity. The 1965 Legislature recognized the need for this navigational improvement and authorized $50,000 in conjunction with the City of Portsmouth's $50,000 as the State's matching contribution. I approved the action of the Legislature and would request that planning work on this project be initiated.

I have designated Commissioner John O. Morton of the Department of Public Works and Highways to coordinate the activities and obligations of the State and local interest involved. Commissioner Morton is requested to take all necessary steps authorized to negotiate and cooperate with the Federal and local interest such that Governor and Council can be advised that the project is economically justified and the assurances can be given.

The proposed plan for this project is hereby approved. However, formal approval of project construction can only be given by Governor and Council upon their findings that all conditions of the Legislative Act can be met. I am advised that forthcoming meetings between representatives of your office and State and local interest anticipate the early resolution of all requirements.

The interest and continued excellent cooperation of you and your staff is most appreciated.

Sincerely,

John W. King

John W. King

JWK/eg